

Solomon

Integrated Hyperspectral/RGB Imaging System



Description

Unispectral's Solomon is a robust, integrated system that combines VNIR hyperspectral and RGB capabilities for comprehensive spectral sensing and object analysis. This multimodal camera system revolutionizes context-aware hyperspectral imaging, providing richer data for deeper insights. Designed for field use, Solomon ensures accuracy, portability, and energy efficiency, making it ideal for various applications.

Key Features

- High resolution RGB imaging
- High resolution hyperspectral imaging
- Integrated VIS-NIR image registration
- Portable and compact
- Easy data collection
- Extensive SDK and API

Applications

- Agriculture
- Food quality
- Industrial inspection
- Robotics
- Computer vision and sensing
- Medical
- Color sensing

Specifications

NIR, VIS Hyperspectral Camera

| | |
|---------------------|---------------------|
| F/ # | 4.7 |
| EFL | 4.98 mm |
| H-FOV, V-FOV, D-FOV | 31.5°, 25.5°, 39.8° |
| Image resolution | 1280 x 1024 |
| Preview mode | 120 FPS |
| Gain | X1 ÷ X10 |
| Exposure time | 1 ÷ 500 ms |

RGB Camera

| | |
|------------------|-------------------------|
| FOV | 70° |
| Image resolution | 1920 x 1024 |
| Frame rate | 1080P/60fps; 720P/90fps |

Spectral

| | |
|-----------------------------|----------------------------------|
| Wavelength FWHM | 25nm ± 5 @ image center |
| Spectral response | 490-935nm |
| Spectral band range | 500-920nm |
| Spectral accuracy | ± 2.5nm |
| Angular dependency [nm/ten] | -1.1nm/deg, @ 30° FOV |
| Working mode | Single frame/spectral image cube |
| Data format | ENVI (Raw) & PNG |

System

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|-------------------|-------------|
| Input voltage | 5 Vdc |
| Power consumption | < 4W (peak) |
| Peak current | < 0.8A |

Working conditions

| | |
|-----------------------|-----------------|
| Operating temperature | 0°-70°C |
| Operating humidity | <90% |
| Size | 100 x 87 x 24mm |

Development Platform

| | |
|------------------|-----------------|
| Host application | Windows / Linux |
| API | Python/C |